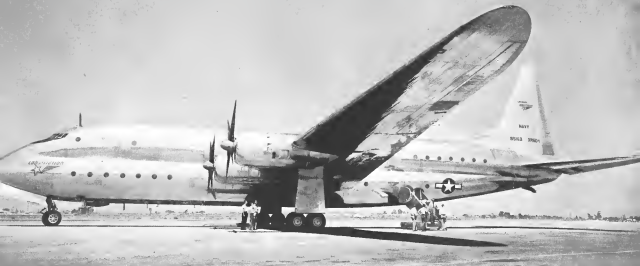


Aviation News

WORLDWIDE PUBLICATIONS COMPANY, INC.

AUG. 26, 1946



Largest Land Transport: Lockheed's XR60 Constitution built for the Navy, was shown to the public for the first time last week at Burbank, Calif. Span of 189 ft. and length of 156 ft. make the Constitution the largest transport landplane ever built in this country. It accommodates 180 passengers in two decks. Power is supplied by four Pratt & Whitney Wasp Major engines. (See story on page 7.)

Fighter Competition Will Feature National Air Races

Outstanding speed pilots slated to fly fleet wartime combat craft.....Page 8

20% AAF Personnel Cut Is Ordered by General Spaatz

Industry awaits effect of expenditure cuts; Wright Field hardest hit.....Page 9

Wallace Champions Cause of Nonscheduled Carriers

Asks CAB to avoid restrictive regulations and withdraw Docket 1501 definition.....Page 11

Beech Topped Salaries in World's Largest Industry

Bendix head got \$157,677, Lockheed's Gross \$135,544, Republic's Marchev \$135,197 in '45....Page 15

New Wave of Airline Financing Seen After Recent Lull

NA sale may break jam; coolness attends AA offer; UAL reported seeking credit.....Page 21

Brazilian Lightplane Makers Cite Rising Latin Market

Sao Paulo officials seek parts in U.S.; produce craft to sell for \$4,500.....Page 23

Defense, Trade Factors Spur South Atlantic Awards

PAA gets two entries to Africa; \$2,500,000 annual subsidy seen necessary.....Page 28

CAB In Move to Solve Airlines' "No-Show" Problem

Approves ATA plan for ticket resales when space is not claimed in time.....Page 29



The PERFECT PAIR for loadings anywhere

On light planes and glider-like original transports alike, you get a double-plus in safety and dependability with Goodyear tires and brakes. In Goodyear rolling equipment you get the benefit of 26 years' leadership in development and design—in wear and tear. You get a closer to first specially designed for every type of operating condition—the world's most popular airplane tires. In Goodyear Single Disc

Brakes you get a brake that provides consistently smooth, powerful action with unusual lightness and simplicity of service to meet any loading requirement. With this transport equipment, specially fitted facilities for added safety, and Airbus wing technology to handle both pilot and passenger fatigue. For data write Goodyear, Aircraft Products Division, Akron 36, Ohio or Los Angeles 58, California.



HERE AIRCRAFT LAND ON GOODYEAR TIRES
SEAN ON AIR 0288 8282



Photo: Lockheed Corp. of the Constitution transport aircraft

Lockheed Unveils Constitution; Forerunner of Jet Transports

Navy will take first model of largest land transport after test flight next month; gas turbines planned for commercial version.

Lockheed's Navy transport, Constitution, whose 185 ft wingspan and 154 ft length last week was rolled into public view from a hangar at Burbank, Calif., is probably even more notable as heralding the transition in large transports from conventional power to gas turbine plants, than it is for its size.

This version of the Constitution, scheduled to fly sometime next month, is powered by four Pratt & Whitney R-4368 Wasp Major engines developing a total of more than 12,000 hp. Another of the huge planes will be built for the Navy, will be used for static tests and perhaps never will fly.

High Turbine Power.—After that, any commercial Constitutions will be powered by gas turbines. Relatively early in the construction of the Navy plane the decision was made by Lockheed that by the time the plane could be marketed commercially, reciprocating engines for so large an aircraft would be obsolete. On this bold premise, construction proceeded and has resulted in a novel design, and other characteristics, that call for the introduction of gas turbine power as soon as it is available. This is believed to be the first large U. S. transport specifically built for gas turbine power plants.

To that extent, the Constitution will be the Navy's preliminary performance in what will follow. But the designed performance of even the version in operation. With a gross weight of 194,000 lb., the Constitution is to take off in only six at sea level with a run of only 2,350 ft., approximately the same as Lockheed's much smaller Constellation. Designed landing clearance over a 50 ft obstacle is 2,360 ft.

Comparative Specs.—Comparative figures for Boeing's 136,000-lb. Stratocruiser, and Douglas' 145,000-lb. C-74 Globemaster respectively

are, take-off 3,500 ft and 3,300 ft landing, 2,350 ft and 2,200 ft.

After disclosure of the size of AAF's Constellation-built D-38 (span 200 ft, length 183 ft.), size alone is hardly noteworthy in an aircraft. The Constitution, however, is the largest transport landplane built in this country. Nearest to it are the C-74 (span, 175 ft, length, 134 ft.) and the Stratocruiser (span 141 ft, length 118 ft.). The Constitution's single ladder, towers more than 50 ft.

The double-deck Constitution has capacity for 140 passengers. Currently, however, 152 will be derived, 82 in the upper deck and 70 below. This allows for 3,900 cu ft of cargo space. By utilizing the entire lower deck for cargo, the cargo space totals 7,400 cu ft. Heads of 30,000 lb capacity are carried, and the plane has cargo doors 106 by 74 in.

Designed originally for the Navy, which designates XR48, as long-range, land-based transport, the Constitution has an extreme range of 6,000 mi, and a top speed of 340 mph.

A number of innovations permit "in-flight" maintenance, the principal one being main-line tunnels within the wings which permit inspection and adjustment of engines



Constitution View. Some idea of the size of Lockheed's latest, and largest, aircraft is conveyed by the piping in the nose to house the retractable storable main wheel.

and accessories. Landing gear, brake and wheel mechanisms are also accessible in flight. Lubrication of most mechanical parts while the airplane is in flight can be accomplished by pumping lubricating oil from a central storage tank to each of the four engines.

Beech, Cessna Prices Slashed by WAA

Backlog of planes on Beech AT-11 and Cessna UC-42 light transport planes to allow for deterioration since the planes were last ground has been announced by War Assets Administration. AT-11s which were \$15,000 are now \$12,500, those that were \$12,500 are now \$10,000 and those formerly selling at \$10,000 are now



Constitution on Display. Mounted under the wing of the XR48 is a Lockheed 12, one of the company's previous transports. The unique landing gear, two sets of dual wheels arranged in tandem on each side, were designed to be safety factor when the main plane is used by the Navy to get in and out of unimproved landing areas overseas.

Cargo valued at more than \$30,000,000, which PLAC has not been able to sell.

PLAC has had declared 119 food aviation casualties abroad. These include airports and airbases currently costing \$84,637,000. Of these, 25 have been sold for a total \$1,000,000. Original cost of those sold was \$13,039,000.

Veterans Court Suit Blocks Airline C-54s

Availability to convert airlines of 30 Douglas C-54s and De Havilland Canada DC-3s to military aircraft has been blocked by a court order.

WAA, on the basis of CAB recommendations, announced allocation of the planes as follows: American Overseas, 1; Chicago & Southern, 2; Colonial, 2; Eastern, 2; North-west, 2; Pan American, 16; Pacific, 2; FWA, 4; and others, 4.

Court Suits. The injunction suit was brought in U.S. District Court in Washington, D.C., by George W. Tomlinson of San Francisco, former Navy lieutenant commander, who said as president of Air Travel, Inc., he had a priority for himself and 14 other veterans to purchase nine surplus C-54s for a coast-to-coast and international cargo line.

WAA's action, said to be a last-minute maneuver, was granted, which they claimed likely, the case would be taken to the Supreme Court if necessary.

The agency said a directive from the Civilian Production Administration, issued at request of the Office of War Mobilization & Reconstruction, took precedence over priority procedures of the Surplus Property Act.

The directive made the planes available to alleviate the shortage, incurred by the granting of Lockheed Constellation, of planes for international air travel. The C-54s were released by the Army for the purpose.

Lines Still Short. With the 30 C-54s offered for lease by the AAF (Aviation News, Aug. 18), the new aircrafts bring recent additional equipment for the overseas operations to 60 planes, a number still far short of requirements for operations of the thousands of miles of international routes awarded by CAB.

WAA named WAA and CPA officials and Washington Director John R. Stinson as defendants. A court order directed them to show why the injunction should not be



BOEING'S GAPA:

The results of 12 months' work by Boeing Aircraft Co. on private airlines would have been unveiled by AAF in the form of a GAPA (Ground-to-airplane) report, a firm, 30-35, multi-powered craft. Windows Field, in the desert of Utah, is being used as a proving ground where 50 GAPA's will be first test run. Powered by jet engines, the aircraft is designed to reach supersonic speeds and act as an interceptor, paid to its target by a "seeking" nose.

granted. Tomlinson is both president and treasurer of Air Travel, Inc., San Francisco, which has asked CAB authorization for unscheduled cargo operations from San Francisco and Los Angeles to Chicago, Philadelphia, New York, and Boston (Aviation News, Aug. 5).

McCracken Heads Board For Collier Trophy Award

The committee to select the 1946 winner of the Robert J. Collier Trophy, award of which is administered by the National Aeronautics Association, is headed by William P. McCracken, Jr., U.S. Welch People's Association president, recently announced.

Other members, besides PAA's and Lowell H. Swenson, NAA executive vice-president, who serve ex-officio, are: William P. Redding, secretary; Russell W. Nichols, treasurer; T. P. Wright, William Anderson, Alfred Mitchell, Grove Lansing, John P. Victory, Ross Adams, Late DePoy, Josephine Cochran, Miss, Lester Gardner, Admiral E. R. Land, G. H. Bobb Wilson, Gen. Carl Spaatz, Harry Skates, and Col. Hanson Taylor.

The award will be made Dec. 17, anniversary of the first flight of the Wright Brothers at Kitty Hawk.

Material Shortages Delay DC-6 Deliveries

Material shortages and delays in receiving subassemblies will push deliveries of DC-6s into 1947, Douglas Aircraft Co. stated last week in issuing its financial statement for the first six months of 1946.

On sales of \$57,143,000, company realized a profit after taxes of \$2,404,261, or \$4.35 per share of common stock. In the first period of 1945, sales were \$448,000,000 and net income \$3,206,000. Total net for this year is now expected to be greater than originally believed primarily because of the delays in delivering DC-6s. This will enable Douglas to change off next year, rather than this, development costs on the plane.

Douglas backlog at June 30 stood at \$143,800,000, of which more than half were commercial orders. In the month of June alone, commercial backlog increased some \$20,000,000, although the military backlog decreased.

Air Education

Elements of the U.S. and 48 foreign countries will meet in New York City beginning tomorrow for an explanation by War Assets Administration officials on shipment surplus aeronautical equipment for use in school programs. The talk will be part of the program of the World Conference on Air Age Education which is meeting at International House, on the Columbia University campus.

CAL Buys 15 Convair 240's

Continental Air Lines has signed contracts with Consolidated Vultee for 18 60-passenger Convair 240 transports. Delivery is expected to begin April, 1947. The transport features auxiliary jet exhaust, cabin pressurization, and a self-contained entrance stairway eliminating airport ramp need.

Rhinestrom Aids AAA

Legal work for All American Aviation will be handled by Frank, Hille & Coopers, New York, upon resignation of Austin M. Rhinestrom, AAA secretary and general counsel, Sept. 1. Charles A. Rhinestrom has been retained as counsel on passenger injury, sales, advertising, and public relations.

SPECIAL AIR SERVICES

CHARTER NON-SCHEDULED INTRASTATE

Wallace Champions Cause Of Nonscheduled Operators

Asks CAB to avoid restrictive economic regulation and withhold deletion of unscheduled operations.

The cause of nonscheduled operators was strongly championed by Secretary of Commerce Henry Wallace in a statement to CAB asking that the Board withhold restrictive economic regulation of such carriers, withhold its deletion of the term "nonscheduled" in its decision in Docket 1301, and request that proceeding.

The cabinet officer's comment was an important addition to comment already received by the Board in the nonscheduled case, but Board members were quick to point out that while it would be given the closest scrutiny the fact that CAB has headquarters in the Commerce Building under a "nonairline" arrangement would give it no more weight than other statements received in connection with the case.

CAB Open Case. Feeling at CAB was that the Board on effect had reopened the case with its announcement (Aviation News, Aug. 5) that it will hold oral argument on proposed changes in economic regulation, 80%, exempting nonscheduled operations from certification, and extending to Sept. 2 the deadline for comment on the proposal. The delay has given full opportunity for presentation of views more than 100,000, and other data that might be offered at a hearing, these sources say.

Wallace urged that as restrictive economic regulation be imposed at this time on common carriers by not offering services other than fully scheduled services supported in part by so much passengers. This brought from a CAB official the observation that the term "fully scheduled" required further interpretation before decision.

The Secretary suggested that the Board "revise the open door" policy under its central exemption order and not make the restrictive interpretation and deletion of the

term "nonscheduled"; that it request Docket 1301 to permit testimony by the many nonscheduled carriers whose operations were established since the original hearings were held, and establish a permanent reporting system for such carriers to the Board and that adequate and current actual data regarding their operations may be continuously available.

Asks Public Need. Emphasizing that his Department's only interest in the case is in "the existence of adequate and economical air services by any form of carrier that can best render such service," he requested the view that no showing had been made of public need for a restrictive economic regulation.



HEAVY LOAD:

Sample of heavy items being carried by nonscheduled carriers is this horizontal shell and tube boiler, 18 ft. long and more than 3 tons in weight. The boiler was carried from Newark Airport to a cargo plant at Orange, Calif., enroute by the Flying Tiger Line, member of the Independent Airfreight Association.

use of nonscheduled air carriers. Instead, he said, indications point to public benefits to be derived from "the widespread development" of such services. Commerce Department's Transportation Division is making an economic study, the secretary disclosed, of "all types of nonscheduled services and operations."

He referred to the many new carriers, financed by private capital, in the nonscheduled field before, in the V-J day, and said that while some might knowingly have offered and advertised a scheduled service in avoidance of economic regulation, the Board "in view of the broad and vague wording of its original exemption order, must accept the interpretation of the bulk of these nonscheduled operations as having been started in good faith."

"It is the strong view of the Department," Mr. Wallace stated, "that the Board's action to delete service (into the nonscheduled field) was taken without full and complete hearing to develop the facts as to the nonscheduled services now being rendered, the economic characteristics of nonscheduled operations; whether discriminatory rules and practices injuring the public exist, whether nonairline services against the Government's financial interest in the scheduled airlines receiving actual compensa-

SURPLUS SALE



PT-26 ARMY TRAINER PLANES

OFFERED FOR SALE AT GORE FIELD, GREAT FALLS, MONTANA

PRIORITY TIME TABLE

- 1st Priority Federal Government Agencies—
September 9, 1946
 - 2nd Priority Veterans of World War II—
September 30, 1946 through September 24, 1946
 - 3rd Priority R. F. C. for resale to small business—
September 28, 1946
 - 4th Priority State and Local Governments—
September 26, 1946
- Then aircraft will be available for sale to the general public (see priority period) after September 24, 1946

Approximately 300 of these desirable load-lift airplanes have been returned by the British Government and are now available for sale. They are being offered at prices ranging from \$600 to \$3000 each, depending upon condition.

They are low-wing monoplanes, Fairchild built, and are similar to the PT-18. Their equipment

includes 200 H.P. Ranger in-line engines, full "glass" cockpit enclosures, landing flaps and retractable automatic swivel tail-wheel.

They reportedly cruise at over 100 M.P.H., have an approximate maximum of 130 M.P.H. and a range of about 630 miles. Some have wood wings, others three wings of fabric over wood. All have fuselages of fabric-covered, square and tubular steel frames, and all wood center sections. All wings are removable. If minor modifications are made to conform with CAA Specifications A-724-3

the PT-26 is eligible for certification for civil use.

Approximately 300 of these airplanes are being offered for sale at Gore Field, Great Falls, Montana, commencing September 8, 1946 in accordance with the Priority Time Table shown herewith.

SALES WILL BE HELD DAILY (EXCEPT SUNDAY) FROM 8:30 A.M. TO 5:30 P.M.

CONDITIONS OF SALE

To assure the most equitable distribution of these aircraft certain conditions of sale have been established. You get full title upon payment of the purchase price in full (all planes are plainly tagged) but all handling will be at your risk and expense. However, a ferrying allowance is granted of 27 per cent from the location of the aircraft to your home airfield, not to exceed \$40.00 on any one plane. The customary twenty per cent reduction from the established sales price will be granted to those already qualified for same and to any purchaser of three or more of this model providing such purchase is made at one time.

At the expiration of all the periods set aside ex-

clusively for priority elements, the remaining unsold aircraft will be offered to the general public. If two or more purchasers desire to buy the same airplane at the same time, the purchaser holding the highest priority will be given the preference. If two or more purchasers holding equal or no priority wish to purchase the same airplane at the same time, a drawing by lot will be held to determine the preference to be given.

W.A.A. warrants the accuracy of the description of the above airplanes, but does not either expressly or impliedly warrant their condition or their suitability for any particular use. No claims for damages from warrented descriptions will be recognized unless made in writing within 15 days after delivery to the purchaser by the seller at the storage point.

IMPORTANT TO VETERANS

Duly certified Veterans of World War II will be allowed a twenty per cent discount regardless of the number of planes they buy.

Those who desire to exercise their preference must present a valid Veterans' Preference Certificate prior to purchase. (Consult the nearest W.A.A. Regional or District Office for information as to where Veterans' Certification may be obtained.)

Veterans must personally present the original of their Veterans' Certificate at the place of sale before the purchase can be consummated. It includes a physical disability, or other certified circumstances, the status is suitable to personally receive his Certificate, the data must be presented to the verifying office. But should the Certificate have proper stamping to add verifying office, the veteran's personal presence may be waived, in which event, the verifying office will advise the sales office at location by endorsement, letter or telegram, the name of the party who will represent and witness, the representative must in such case present the written authorization in direction of the veteran as well as the original Veterans' Certificate. All activities meeting the following qualifications will be honored. All certificates—

- 1 must be typewritten
- 2 must be signed in ink by a W.A.A. Veterans' Division verifying office showing his title or signed in ink by him affixed if a rubber stamp is used
- 3 must be completely free from erasures, alterations or additions of any kind
- 4 must designate the type of aircraft the purchase desires which will be described as "General Aircraft under 1000 lbs. gross weight."

NOTE: If your certificate does not meet the above specifications, you must obtain a replacement certificate from your verifying office.

All bids of sale will be made out to veterans whose name appears on certificate. Commencing on the day preceding the first day set aside for exclusive sale to veterans, the certificates may be presented, and those found to be in order will be placed in chronological sequence. The certificates bearing the oldest dates will take precedence.

W.A.A. reserves the right to limit delivery against such certificates to one airplane, if in its judgment, the supply of airplanes for sale is not sufficient to permit of equitable distribution otherwise among all certificate holders.

These Airplanes Will Be On Display On And After August 20, 1946

OFFICE OF AIRCRAFT DISPOSAL

418 SECOND STREET, N.W.

WASHINGTON 25, D. C.

WAR ASSETS ADMINISTRATION

vice-pres. eng. \$40,000, \$2,857.
REPUBLIC (year ending 12-31-45)
 Alexander Kartvel, v-p, \$47,460;
 C. Mark Miller, v-p, \$38,190; Mandy
 J. Peels, v-p, \$37,900.
WACHTER (year ending 12-31-45)
 Glenn L. Martin, pres. \$46,470,
 \$13,950; Joseph T. Martin, v-p,
 \$30,340, \$7,973; Harry F. Vollenweider,
 v-p, \$28,440, \$6,973.
WEECH (year ending 6-30-45)
 Walter M. Beech, pres. \$81,713,
 O. A. Beech, sec.-treas. \$43,854, J.
 P. Caty, v-p, \$-m \$22,284; T. A.
 Wolff, v-p, chief eng. \$21,916.
GRUMMAN (year ending 12-31-
 45)
 Leroy H. Grumman, pres. \$43-
 300, \$16,630; L. A. Swetford, exec.
 v-p, \$63,300, \$6,536; William T.
 Schwendler, v-p, chief eng. \$33-
 085, \$2,830; E. Claxton Towle, v-p,
 \$21,468, \$1,120.
UNITED AIRCRAFT (year ending
 12-31-45)
 Leonard S. Hobbs, v-p, eng. \$32-
 316, \$1,214; H. Michael Hauer,
 pres. \$61,500, \$3,331; Joseph F. Mc-
 Carthy, com. in ch. \$42,918,
 \$1,245; Frederick B. Schembler,
 exec. \$79,850; Raymond Walsh, v-
 pres. \$50,730, \$1,522; Eugene E.
 White, v-p, ch. \$41,560, \$1,965;
 Sidney H. Stewart, v-p, v-p, Hien-
 den Standard Propellers, \$35,320,
 \$1,147; Charles J. McCarthy, v-p

\$35,006, \$1,281; William P. Green,
 p-m, Pratt & Whitney, \$30,320,
 \$650; Rex B. Duzel, p-m, Chance
 Vought, \$27,753, \$1,428; Bernard L.
 Whelan, p-m, Sikorsky, \$15,806, \$1-
 681.
PRENDIX (year ending 6-30-45)
 H. P. Ferguson v-p, \$34,201, \$2-
 254; W. H. Doughton, treas. \$47,825,
 \$2,240; E. T. Barker, v-p, \$24,670,
 \$1,778; A. K. Kiefer, v-p, \$20,969,
 \$1,596; B. P. Lanning, v-p, \$20,350,
 \$2,340; Charles Marcan, v-p, \$45-
 724, \$1,582.
PROBING (year ending 12-31-45)
 William M. Allen, pres. (since 8-
 4-52) \$14,450; William E. Beall,
 v-p, eng. \$22,050; Harold E. Bar-
 man, sec.-treas. \$70,590; C. L. En-
 velt, chm. \$43,000; Fred P. Lan-
 den, v-p, \$30,900; J. E. Schwert,
 v-p, \$24,600; H. O. West, sec. v-p,
 \$37,569.

Roomy Flight Deck For Stratocruiser

With an eye on the low-cost
 flights for which the aircraft is
 especially designed, Boeing Aircraft
 Co. has built into its 80-passenger
 Stratocruiser a crew's flight deck
 that probably gives them closer to the
 command of a mainstay's control
 house than any other plane yet en-
 visioned.

Air - conditioned, soundproofed
 and containing 124 sq. ft. floor area,
 the compartment can accommodate
 five crew men and an observer, who
 occupies a seat beside and slightly
 behind the pilot, or can be rigged
 out for two of three for shorter
 flights (AVIATION NEWS, Aug. 29).
 In the version for a five-man
 crew, only basic flight instruments
 are before the pilot and co-pilot.
 All others are behind the pilots, on
 a special panel moved by the flight
 engineer. The forward seven win-
 dows of the glass-in nose are
 electrically-heated, while the three
 directly in front of pilot and co-
 pilot are of special "hardproof" con-
 struction.

By lowering the instrument panel
 just below normal eye level, Boeing
 claims that the Stratocruiser pilot
 gets unobstructed ground visibility
 as near as 26 to 40 ft. directly be-
 hind at the airplane.

Recognizing the fatigue present in
 long flights, the engineers have put
 into the crew compartment custom-
 built reclining seats, adjustable for
 height and position, and containing
 folding arm rests. For the main-
 stream, special care was given to the
 soundproofing with the noise, ac-
 cording to Boeing, that commu-
 cation during flight can be carried on
 in the compartment in normal tones.

New Power Package Developed by Ranger

Development of the 800 XGGE-1
 (AVIATION NEWS, Aug. 12), a light-
 weight and low-powered, but long-
 range and efficient Navy scout plane
 called for a new type of power plant
 when Ranger division of Fairchild
 Engine and Airplane Corp. has built
 around a Ranger V-77B-6 engine.

Main features of the power unit
 are ease of maintenance, quick
 mounting and interchangeability.
 All lines passing through the fire-
 wall are fitted with quick-discon-
 necting couplings; controls and in-
 strument lines are grouped on the
 firewall according to function, and
 the entire unit is fastened to the
 aircraft on four bolts which join
 the engine mount to the airframe
 at the firewall.

The oil system is an integral part
 of the power unit, with oil tank,
 cooler and all connecting lines
 fastened to the engine mount.

By removing lower wing root
 sections, the overhauled engine is so
 prepared for servicing. It is estimated
 that 75 percent of all line main-
 tenance can be done through this
 hinged cover.



New VARI-COOLED opposed engines by Jacobs

Jacobs' leader of work has included
 engines for two decades, numerous
 four-cyl. opposed engines.

6-2400, 4 cyl., 200 hp, 1000 rpm
 6-2400, 4 cyl., 200 hp, 1000 rpm
 6-2400, 4 cyl., 200 hp, 1000 rpm

THE PLAT PARQUETTE with small
 found area fits snugly into narrow
 nose of shallow wing nacelles.

THE EXTENDED NOSE GEAR allows
 better streamlining, more efficient
 propeller operation.

AN COOLER MODEL incorporates
 reverse-cooling, requires no extra
 intake, exhaust "log eye" work or
 exhaust ducting, improves fuel distribution.

UNION COOLER MODEL employs high
 velocity, negative-drag type barrel
 reverse-cooling, particularly advantageous
 for subsonic installation.

FUEL INJECTION covers bands of
 combustion ring... eliminates danger
 of engine stall during glide or idling
 ... distributes fuel equally to every
 cylinder... reduces cylinder head
 temperature for longer engine life.

For the aircraft designer and
 manufacturer, these four new Jacobs
 opposed engines allow advances in
 special plane design not feasible with
 conventional cylinder heads.

National Aircraft Show
 Cleveland, Ohio... November 12-16
 Jacobs Aircraft Engine Company



Also show of Jacobs cooled model
 built-in, reverse-cooling, barrel
 reverse-cooling, particularly
 advantageous for subsonic
 installation.



Also show of Jacobs cooled model
 built-in, reverse-cooling, barrel
 reverse-cooling, particularly
 advantageous for subsonic
 installation.



Packaged Power: Simplicity of maintenance was goal of Fairchild's
 Ranger division in designing power plant installation of XGGE-1, Navy's
 new scout plane built by Fairchild Engine and Airplane Corp. Weight control permits
 ease of access, and approximately 75% of oil maintenance can be done
 through these panels. Entire power plant assembly can be installed or
 removed in 20 min.



JACOBS Pottstown, Pa.



Part of the Stratocruiser's wide cabin, giving up to 40 passengers

Country-club comfort

Air travel has come a long way since passengers crisscrossed in open cockpits, bearded in the eyes. Now—in the new Boeing Stratocruiser—comfort will make its greatest advance in the history of flight.

Traveler in airplane as perfectly airconditioned that even the faintest trace of tobacco smoke is filtered from the atmosphere. Air in the cabin is completely changed every 90 seconds. Humidity is controlled. Windows could fog and drafts are eliminated. Self-contained equipment provides air heat for the Stratocruiser on the ground,

ensuring immediate comfort to passengers go aboard. No level stratocruiser is maintained inside the plane while flying at 15,000 feet. At 15,000 feet it's the equivalent of only 3,000.

You'd expect such comfort in the upstairs, twin-decked Stratocruiser, for Boeing is the only manufacturer with extensive previous experience in altitude conditioning of commercial and military aircraft—experience gained in designing and manufacturing the Stratofortress and the B-29 Superfortress Boeing Airplane Company, Seattle, Washington, Wichita, Kansas.



BOEING
STRATOCRUISER

The Stratocruiser's exceptional speed, comfort and reliability will soon be available on

these forward-flying airlines: Pan American World Airways, Swedish International Airline.

Northwest Airlines and American Overseas Airlines—the world's first Boeing Stratocruiser flying routes of these super transports.

FINANCIAL

New Wave of Airline Financing Is Forecast After Recent Lull

Sale of 150,000 National Airlines common may break logjam regarding carriers' finance plans; American offering met with cool reception; United reported seeking bank credit.

A new wave of airline financing is currently in the air, having after a lull of more than two months. The recent sale of 150,000 additional shares of common stock by National Airlines may break the logjam regarding other airline financing plans.

The poor reception which attended American's \$90 million debenture and preferred stock offering, a few months ago, caused a number of airline management to shelve pending financing plans. Investment circles believe that the new American securities were priced "too high" and there was too much fear for the market to digest. The new debenture was sold at 130 and are currently quoted around 90. The new 3½ convertible preferred, first scheduled at 132, can now be had at 85. Both issues are now up considerably from the low points reached subsequent to the original financing.

Some observers maintain that the debenture turned too low as the interest rate and looked the new security feature formerly present in such issues. Further, the preferred conversion rate (1 \$21 per common share) was regarded as too high and the preferred flotation was too staggering. Upon full conversion of the preferred, it and when realized, an additional 1,004,791 shares of common stock will be created on top of the \$68,828 previously outstanding. Further, when 100,000 shares of employee stock are issued and an additional 150,000 shares of common come into being when C. E. Smith exercises his option, still more dilution will occur.

How Western began—in the American financing, the company received some \$73.5 million. The underwriters were originally left with about half of each issue and are still in the process of disposing of their holdings. It was this experience which made other investment bankers wary in bringing other airline issues to market.

However, additional plans of Western, both recapitalizations and new models are expected to be heavy shortly later this year. The carriers will require substantial funds to make payment on these deliveries.

National Airlines realized approximately \$1,750,000 on its sale of 150,000 shares of common, the stock being offered to the public at \$20 per share. These shares ranged from a low of 25 to a high of 34½ during 1945. The book value of the stock is slightly better than \$4 per share. Accordingly, the equity was materially improved by this recent financing despite the sagging of the previous share by slightly less than one-third.

American Overseas Airlines, which recently split its common stock four for one, may be expected to enter the capital markets soon. The split was made to facilitate any public financing that may be required. The company now has a \$18 million bank loan guaranteed by its controlling stockholder, American Airlines, Inc. The latter owns approximately 55%, while American Export Lines, the founder, retains about 34%.

American Airlines acquired 120,000 shares of the old stock at \$20 per share back in June 1944. This stock now has a market price of around \$16, as contrasted to American Airlines' adjusted cost price of \$6.25.

FLIGHT Expenses—United Airlines is expected to be seeking a bank credit of around \$10 million to supplement its expansion program. Obviously, this is mainly a company expedient and, if issued, the loan will most likely be replaced by permanent capital in the form of a new stock issue. The forced conversion of the company's preferred stock, earlier this year paved way for additional financing.

Airline Ownership Revealed by Survey

Despite the broadening public interest in airline shares, there are about ten companies whose controlling ownerships are held very closely by a few men. This was revealed recently by a compilation attached into the Congressional Record by Rep. Harlow of the aviation subcommittee of the Committee on Interstate and Foreign Commerce.

William A. Caudill, owning 248,318 shares of 45% of Western's total common stock, had a market valuation of \$5,294,500 on his holdings. The Hughes Tool Co. was reported as owning 435,000 shares of TWA on Dec. 31, 1945, or about 44% of the total. These holdings were worth about \$21,150,000 at current market prices. It is very significant that the Hughes Tool Co. was revealed as an owner of TWA shares recently. This may be a reversal of the previous trend, which showed Hughes as a constant purchaser of TWA shares, especially during periods of market depression.

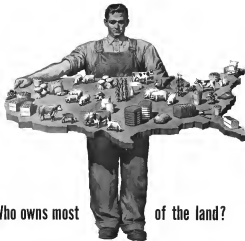
Thomas E. Braff, owning 288,779 shares, or about 28% of Trans World, shows a current market valuation on his stock of about \$1,250,000. Incidentally, Mr. Braff not only owned all of his original investment in the airline but in addition retains the present stock interest.

Other controlling stock interests, as of Dec. 31, 1945, are included in the accompanying box.

Other Controlling Stock Interests

(As of Dec. 31, 1945)

Company	Investment Shares	Percent of Total	Shares Held	Approximate Current Total Market Valuation
Continental	20	20	20,000	\$1,000,000
Delta	20	20	20,000	\$1,000,000
Eastern Pacific	20	20	20,000	\$1,000,000
Northwest	20	20	20,000	\$1,000,000
Southwest	20	20	20,000	\$1,000,000



Who owns most of the land?

DON'T look now, but Colombia, the American farmer, owns or operates 1,322,617,221 of the nearly 2.4 billion acres in the continental United States.

What a mess! And what a messager!

What are his plans? Surveys show that 35.4% of farm owners expect to build a new house, either farm or tourist. 74.9% expect to make major repairs, improvements, or additions to farm dwellings. They'll redecorate interiors, paint outside, install running water, modernize kitchens. There'll be new fences, barns, garages, machine shops, refrigerators, ranges, washing machines,

farm freeways, planes (and hangars to house them). The variety and volume of wants are almost endless!

It is on America's top-half farms, with over four-fifths of the national farm income, that Country Gentleman's six-million readers are concentrated. These readers, incidentally, own or operate almost 30% of all the farm land in America.

Basic magazine in America's biggest industry, CG stimulates wants, directs their fulfillment, provides the brand-names before eager millions with buying pockets.

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PRIVATE FLYING

Brazilian Lightplane Makers Cite Expanding Latin Markets

Officials of São Paulo tout U. S. seeking parts, accessories for increased production of their models; produce spin and stall-proof plane to sell for \$4,500

By ALEXANDER MCURILEY

Two top officials of the largest Brazilian company manufacturing lightplanes, Companhia Aeromobiliária Paulista, of São Paulo, predict a rapidly expanding market for light aircraft in their country.

In Washington last week, at the office of their American agent, John W. Gordon, Industrial Services, President Francisco Pugliese, and Director-General Jorge Figueira, were enthusiastic about the future prospects of their newest model, one for flight test later this year, the four-place CAP-18. The lightweight, side-by-side plane is powered with a 125 hp Continental six cylinder engine, and is designed to be spin-proof and stall-proof.

It has a very low landing speed, they report, but it is to cruise at about 120 mph, with a five-hour fuel supply and will have a gas foot throttle and gearshift for greater ease in landing. Tentative price, \$4,500.

Orders Placed—While visits which

they are making to several American plants are in the nature of reconnaissance visits, they have already

placed orders for: 10 Franklin 150 hp, Model 655-154-A3 engines; a number of Aeromac propellers; hydraulic equipment; Ivatt Adel installed one power jack and used three hydraulic actuators; two Baldwin stress indicators, two W. C. Dillon dynamometers, two Bendix instrument panels, one Bendix speedometer, and one PAFS-18 Bendix radio, a number of Stewart-Warner fuel gauges, 40,000 ft. of seamless aircraft tubing, and quantities of Plexiglas, nuts, bolts and miscellaneous tools.

The 150 hp engine presumably will be used in one of two four-place airplanes they have developed for the Brazilian farmers and ranchmen who are seeking the trend toward private aviation in rural areas.



Brazilian Lightplanes—Two personal planes produced by Companhia Aeromobiliária Paulista, São Paulo, Brazil, are the two-place CAP-6 and the four-place CAP-18. The four-place CAP-18 is the first Brazilian lightplane to be produced in Brazil. The two-place CAP-6 is powered with a 65 hp Continental engine, while the four-place CAP-18 is powered with a Franklin 150 hp engine.

Small Plane Makers

Testimonials by the Brazilian Ministry of Aeronautics of the type of modern light planes in use in Brazil as of Dec. 1, 1946, shows that Companhia Aeromobiliária Paulista of São Paulo, led all other companies, with 86 of its CAP-6 Paulistinha models. Second was Piper, with 181 Cub trainers and 18 Cub Cruisers, while Herpex, Inc., another Brazilian maker, was third with 52 Model 80.1 and 12 Model 80.2 Aerocub was fourth, with 35 Model 80.2 and 20 trainers, and Stinson was fifth, with 21 Model 105, 13 Voyager, and 19 Reliance. Other types in numerical order: Moth Trainer (Datsun) 16; Mono Model 7 (Benzard) 16; Waco Model NF, 15; Beechcraft (Hercules) 15; Biplace (Beechcraft) using German Fieseler Wolf design 12.



LITTLE DIPPER IN FLIGHT:

Post published flight picture of one-place Lockheed Little Dipper, originally planned as a slow-flying military home plane, and as a power-type for further Lockheed lightplane development, shows slow-flying AT-7A midjet just after takeoff. Lockheed is still interested in further lightplane development but is not expected to be an active competitor in near future, in personal plane market. Little Dipper reportedly has a landing speed slightly above 25 mph yet will cruise at around 100 mph. (Martin & Kellner photo)

Brazilian Headache

Problems of obtaining materials and accessories to make aircraft, which still after American plane manufacturers easily handle, are still compound to those which afflicted Companhia Aeronautica Paulista of Brazil during its beginning days in 1942, when the company was unable to get aircraft valves, nuts and bolts, or tires, despite the raw rubber available in Brazil. The company solved its problems by adopting a Brazilian rubber tubing press to make the steel tubing, manufactured built on its own lathe, and even manufactured its own tires.

The tires were not so bad that they were good for only one takeoff and one landing before replacement. But the company exhibited them at an Industrial Exposition in Sao Paulo. A larger tire manufacturer which had refused previous CAP orders, suddenly invited the group at a possible competitor, and offered to provide the growing young company with airplane tires. The first 11 CAP planes, completed in May 1943 were fitted with tires ordered from other planes by private Brazilian plane owners, to fill a government order.

Enough airplanes to outfit the first 11 planes also were obtained from used planes, and reconditioned. Later the company made many of its own instruments, until they could be obtained through imports.

seen in this country. One of the planes, CAP-8, is a low-wing plywood monoplaner with retractable landing gear, while the other, CAP-9, is a high-wing steel-tube-fabric plane with fixed conventional gear. Best seller—Best seller of the CAP planes yet, has been CAP-6, the Paulistinha. The company is making 50 of these two-place high-wing monoplanes a week, for private owners and is completing a 200 order for the Brazilian Air Force. The plane is generally similar to the crosshopper design used by the Americans early in World War II. The Paulistinha was the most popular lightplane type in Brazil as of Jan. 1, 1946, according to statistics released by the Brazilian director of civil aeronautics, with a total of 240 planes.

The company, originally a small elder manufacturer, has expanded from 50 employees in 1942 to its current 1500 employees, who work in a modern factory at Ubatuba, near Sao Paulo. A subsidiary company, Construtora Aeronautica S/A, at Lagoa Real is making AT-6 Texan advanced trainers for the Brazilian government under license from North American Aviation, Inc.

Young Officers—Presently, besides building CAP, is the kind of 11 other Brazilian companies. It is 29 years old and Pragaço is 38. The chief design engineer, a graduate of Massachusetts Institute of Technology, Oswald Barreira de Oliveira, is 39.

Statistics reported by the Brazilian director of civil aeronautics,

concerning private flying, show that the Brazilian lightplane fleet now 75,506 hours and that 274 private pilots were licensed in 1945.

While not operating on as large a production scale as many of the American companies, the Brazilian manufacturer has a strong advantage over American and British competitors because of the distance involved for overseas shipment of foreign-built planes. It is likely that CAP may continue to take the major share of lightplane business in its own country, although competition from the United States and from British manufacturers is expected to grow keener as production increases and domestic customers' orders are filled more rapidly.

A key to the forthcoming competition may be won at the report recently from the Brazilian air ministry that more than 200 applications have been filed to import private planes, about 50 of which are Piper Cubs. Approximately 80 percent of the total are American planes, most of the others being British-made.

Nelson Dragonfly Test Seeking CAA Licenses

The spectacular powered sear plane of Nelson Aircraft Corp., now rechristened "Dragonfly," (formerly Hawkhawk) is undergoing CAA certification flight tests at Oxnard, Cal., after months of delay.

Designed by Hawley Dowton, widely known West Coast airplane builder, the Dragonfly is to be the subject of further modifications on specific license details, with CAA in Washington.

Because the Dragonfly is neither glider nor airplane but a mixture of both, CAA doesn't have existing requirements covering its features. Recently CAA officials created for the Nelson aircraft the new designation "powered sear plane." And tentatively have agreed to allowing whatever device may be necessary from CAA-60 to cover features of the aircraft which are at variance from the intent of the regulations.

For example, the manufacturer has been required—because the powered glider has a hand retractable landing gear—the aircraft's cockpit wiring light and horn which are required when the Dragonfly is intended to be used as the engine is not off. In an airplane designed to do much of its flight as a sear plane, it is obvious that the pilot will spend many hours



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with the warning horn blaring in the ear. While manufacturers are supplying with the CAA requirements in the new protocols, they point out that the indication of the purchase will be to clip the wings of the warning device after it comes from the factory. Similarly, the manufacturer has been required to install after-market devices which are felt would be unnecessary for what is basically a vintage aircraft.

At the Sea Level Factory National Aircraft Corp. has completed successful tests of its new two-cylinder, two-cycle, 25-hp engine which will power the Dragonfly. A production line will be started this week. The engine will appear on the market with carburetor cylinders instead of magneto as an option was planned, present magneto alloys proving unsatisfactory in some conditions of cylinder heat.

Northwest Operators Group Ponders Air Regulations

At an organization meeting of the Northwest Idaho-Eastern Oregon Aircraft Operators association at Gooding, Idaho, recently a committee was named to analyze thoroughly Part 43 Class A Regulations and present recommendations for endorsement or opposition at the Northwest Aviation Planning Council, Butte, Mont., Sept. 31. The operators declared the state of their new organization. "To promote and foster all matters pertaining to commercial operation of aircraft," and restricted voting membership in order to prevent making their living from aviation, although non-voting associate membership will be open to "friends of aviation."

Flying Candy Man

An Elmore/Byrne craft salesman, Joe Green, of Kansas City, Mo., has just come back out to the home town of Peter Paul, Inc., Springfield, Conn., recently officials of the company were so impressed by Green's use of the lightplane to cover his Midwest territory, that they made an offer of \$1,000 to each of the first three salesmen of the company to buy six planes to cover their territories. The offer was made on condition that Green deliver a plane as that Green received a \$1,000 check. This still leaves two other very good prospects for lightplane sales on the Peter Paul sales staff.

Briefing For Private Flying

MICHIGAN ANNUAL CRUISE—Annual tourists will be invited to fly on the Michigan Aviation Club Cruise, over the northern Michigan peninsula, at the time when autumn colors in Michigan forests are at their best, and the partridge hunting season opens Sept. 25-Oct. 3. The tour starts at Traverse City, Sept. 26 and after a weekend there, will include stops at Muskegon, Crystal Falls, Marquette, Shanty Park, and Charlevoix. Reimbursement planned will include housing, eating, drinking and fuel. A tour show, visit to Lake State Prison, visit to lumber camp, and demonstration of post-war personal planes. Schedule calls for flying in the morning with afternoon and evenings reserved for recreation.

BAROMETER RISING—Backing of Stinson's Brothers, Lancaster, Pa., largest maker of lightplane propellers, helps movement, although the company is stepping up prop production steadily. Production is now 4,500 a month, and soon will be 5,000. The company has had to ask some of its customers to look elsewhere for some of their props. A similar condition exists with landing gear. Propellers, landing gear, and other items are expected to be making 500 variable pitch props a month, and is working for an eventual 1,000 a month. Other prop manufacturers are reported to be in the same financial straits. It is a reliable indication that most manufacturers of lightplanes are looking forward to a bigger year's production in 1945. If some different manufacturers hold their own as new customers' orders until Dec. 31, they will have a six-month backlog to go into the next year.

OREGON AIRPORTS PLAN—Oregon state board of aeronautics has recommended that the state spend \$100,000 annually as it dears to retrofit airport aid money. This would provide approximately 50 new airports and improve five existing fields at a total cost of around \$4,000,000 in five years, but would not take full advantage of the maximum of \$4,900,000 which could be spent, for Oregon airports under the federal allocation. It is expected that some individual Oregon communities will put up their own matching funds to obtain an additional share of the federal aid. The plan calls for 31 Class I fields, six Class II airports and one Class III field.

CONFEDERATE AIR FORCE—Two World War II military pilots, now flight instructors at New Bern (N.C.) Aviation Company, Brunswick-Kent Airport, are sponsoring the formation of a Confederate Air Force, some 45 years too late to do the South any good in the War between the States. Starting with a nucleus of the 60 student pilots whom they are instructing, it is planned to qualify other Southern private fliers as "confederates" and a few recruits will be made in case of Yankee pilots who can show they were reliable in the south for five years. The pro-Confederate flier, the confederate "stars and bars," at the headquarters airport. The organizers, E. H. (Mac) Bolton, and Albert McWhirter, have announced as their objectives, the formation of a brotherhood of pilots before the Mason and Dixon line, the promotion of private flying and better airport facilities in the South, and full cooperation with CAA and CAB at all times.

TOURING CANADA—Three representatives of the Colorado Flying Farmer Association are visiting Canadian farmers, and recently participated in a radio broadcast from Toronto on the use of aviation in rural areas. The tour led by Dale Rogers, president of the association, was held in the establishment of Canadian flying farmer organizations similar to those in this country.

OPERATORS PROTEST—Tennessee Flight Operators Association has filed protest with the state bureau of aeronautics, against the Oct 3 deadline for compliance with state minimum airport requirements. The representatives called for amending of standards, adequate equipment, the necessary, larger construction and other facilities which are being delayed by the current lack of material shortages. The requirements were announced June 1, with an original July 1 deadline which was extended when it could not be met by many of the operators. The association is in favor of the objectives of the state requirements, but believes additional time should be given for compliance.

—Alexander McWhirter

Air Accident Rates Increase In 1945

544 persons killed in private flying crashes, sharp rise due to expanded activity, CAA survey shows

An increase in the number of private flying fatalities to 544 in 1945 as against 382 deaths in 1944 reported by the CAA safety bureau may be attributed in large measure to the tremendous increase in the number of private plane air miles flown, during the same period.

While CAA analysis has not completed their studies and the total number of air miles flown by private pilots is not yet known for either year it is believed probable that the fatalities per flight mile are comparable for both years.

Point Debated—The finding of CAA analysis that private pilots are responsible for a large majority of all accidents now raises the point argued by Aircraft Owners & Pilots Association and other flying groups, whether many of the fatal accidents are not due to lack of properly equipped aircraft, or to the possibility of short-circuiting of the airplanes because of failure to eliminate hazardous characteristics in design.

Only a very small quantity of actual post-war built airplanes was in the hands of private fliers by the end of 1945. A very large percentage of the planes in use were old private planes, used beyond their useful lifetime, and war surplus machines, not designed for the private flier. Probably not until the end of 1947 will the actual private flying accident statistics begin to reflect a fair picture of post-war flying when enough post-war-built planes, with considerably improved safety characteristics are being flown to reflect most of the private and war surplus aircraft.

A total of 3,291 accidents—including fatal, serious, and minor or 79.3 percent of all accidents, were distinctly attributed to pilot error by CAA.

Material failure—wing breaking free, failure of landing gear, etc.—accounted for the next largest category, 618 accidents, or 18.3 percent. Miscellaneous causes—weather, crashes to avoid a collision on the ground, etc.—were responsible for 442 accidents, or 9.5 percent.

Serious accidents, involving serious injuries but not deaths, totaled 752, and 444 persons were injured.

In 408 minor accidents 671 persons received slight injuries.

Also recorded were 3,518 acci-

dents in which planes were reported as damaged in varying degrees of seriousness but in which there was no injury to personnel involved.

Professory investigations indicate that landing accidents, as far from the case previously, are the largest general type of accident (probably nearly 50 percent) but only three or four percent of personnel killed in a year are killed by landings.

Parks Predicts \$4,000,000 Business Volume for Firms

A gross business volume of \$4,000,000 is envisioned by Parks Aircraft Sales & Service, Box 59, Lewis III, operation of which is now being financed by a one-year-two-thirds state loan, from Parks' report.

While gross volume for the first six months was only \$1,800,000 Parks said total delivery commitments for the first six months would make it possible to carry out a greatly enlarged merchandising program. He based average of 75 cents a share for his company this year, and predicted \$12,000,000 gross business in '45, with 32 contracts.

The company has exclusive distribution in its territory for the two-engine lightplane category, Bendix Aviation aeromarine radio



CESSNA 140 INTERIOR

Fitness and furnishings were luxuriant than those of greater planes are expected by postwar private fliers, as new planes, and they are getting them in Cessna 140 two-place 140 hp lightness airplane. Shock-mounted instrument panel, dual control yoke, over-the-hill upholstery and soundproofing are among this plane's strong selling points to retro private flier.

products, and Continental engine and gear. Following the report to his board, directors voted approval of a \$200,000 expense and equipment program at the current hour.



MEIXELL HONORED

Representative of aviation in government and industry honored Barry Meixell, newly appointed executive director of National Aeronautics and Space Administration at a recent Washington reception given by Personal Aircraft Council, Aircraft Industries Association. Left to right, seated, George Burpee, assistant to William A. M. Jordan, assistant secretary of Commerce; Joe E. John, Jr., manager, Personal Aircraft Council; Standing, Lloyd Child, secretary, CAA; Non-aviation Flying Academy Committee, A. L. C. Croft, NATA general counsel; D. B. Montgomery, Jr., general manager, Aircraft Owners and Pilots Association; Laurell Davidson, secretary, National Aeronautics Association; John Greer, assistant to CAA Administrator for private flying.

Defense, Trade Prospects Spur South Atlantic Route Awards

Pan American gets two entries to Africa via Anzures and Ascension; \$2,560,000 annual subsidy seen necessary.

Civil Aeronautics Board's decision in the South Atlantic case, considering two routes to South Africa, to Pan American Airways, admits frankly that the venture will prove costly to the U. S. Government—perhaps as much as \$2,560,000 a year—but it is necessary because of national defense and foreign trade.

Last of the international route cases, except for a few uncharted phases of others already decided in the past, the Board's first recent international route opening adds attention to the role of an air transport's expenditure in international relationships.

South Africa—Union of South

Africa is the principal recipient of CAB action in this respect. It becomes the terminal of both routes, one of which goes to Johannesburg and Capetown from New York via the Azores, Dakar, Morocco, Anzures and Leopoldville, and the other from Natal, Brazil (which Pan American already serves) to the same enclaves via Ascension Island and a point in West Africa, possibly in Portuguese Angola. Distance from New York to Capetown is approximately 8,500 mi. via the northern route and 8,100 via the southern.

The Bureau candidly recognizes that European nations will be making

every effort to absorb the share of the Union's trade heretofore enjoyed by the Axis nations (about 14 percent in 1937) and that the United States will be faced with the same competitive handicap as in the past unless there is made available more expeditious means for personal travel between the country and Southern Africa. If the U. S. can increase its foreign trade with the Union even to the extent of their bid by the Axis Nations, the Board feels, it would approximately double the \$180,000-\$200 worth of goods exchanged in 1937.

The Board expects only about 4,000 passengers for the first normal year of service. This number, it says, would fall short of furnishing sufficient passenger revenue to maintain the service, "and the amount of Government assistance in mail pay may possibly exceed \$1,000,000 a year." In view of our former commercial interest in Africa—\$100,000,000 of exports and \$90,000,000 of imports—and the "valuable prize to seek" in former Axis business, the Board believes that the indicated route to the Government is warranted as a trade stimulant.

Finance Unfathomable—In discussing the southern and more agreeable of the new routes, the opinion states that "our authorities incline as to believe that to run a schedule a week over this route would, discounting any revenue derivable from operations, mean an additional cost of about \$1,500,000 for maintaining this segment."

Such a cost certainly would deter the Board, "but considerations of national defense for certification of this route have been advanced by high levels of the War and Navy Departments and of the Executive. Their interpretation of national defense—as always that under the [Civil Aeronautics] Act we must heed—weighs heavily as against economy of operation."

The problem of landing rights must be settled before operations can begin, but the State Department and Pan American do not anticipate that it will be difficult. No agreement has been effected with the Union of South Africa, though one has been submitted to the officials and Pan American says it has reason to believe favorable action will be forthcoming soon. Official sources say Brazil's consent must be obtained for use of Natal as a take-off point on the southern route. Jesse M. Landa, CAB chairman, in an hour-long talk for conversations on air rights.

Agreements Cover Landings—The U. S. has an agreement with Portugal Commercial bases on the Azores have not been opened—although this is expected momentarily—but Pan American has an established base there. Liberia has subscribed to the five freedom agreement, which will permit a traffic stop at Monrovia, and a U. S.-French pact covers Dakar. The U. S.-United Kingdom agreement offered at Bermuda included Ascension Island and Anzures on the Gold Coast. Leopoldville is covered in the agreement with Belgium.

Pan American has been flying to Africa for some time. The Azores are included in its route to Lisbon, and it operates from Lisbon to Monrovia and to Leopoldville under temporary permits acquired last month. Between 1941 and 1943 it operated temporary service between Miami and Leopoldville via Natal and other points. Pan American has the over-sea arrangement with Brazil, specifying frequencies and equipment.

In keeping with its policy on international routes, both new certifications by the Board are for seven years. CAB sees no guarantee in a position to consolidate its traffic as far as the Azores, where other planes for operations beyond can be used, thus eliminating the cost of operating a seasonal plane between New York and the Azores, a 2,450-mile hop, that would accrue if a steady service were certified. On the basis of two round trips a week, the Board says the route would mean an annual saving of 31,000 plane miles which, at PAA's estimated light cost of \$1.93 per mile for Constellation planes, would reduce the estimated deficit involved in the Azores route operation by \$207,000 a year.

This consideration was an influence.

Can Child Fare

Other airlines are placing Continental in reestablishment half fare for children under 13, although no covered after by scheduled air carriers has yet been taken along this line.

Continental put the saving into effect yesterday (Aug. 25). Pomeroy, Texas, Dallas and Chicago & Southern have filed to file with CAB they will do so. Reg. 1, 2, and Delta will follow.

The airlines say they follow under 2 not occupying a seat.



EVOLUTION IN SIGNS:

Development of Braniff's response to the bottom design, adopted after CAB's latest international decision gave the line new international routes, is shown above. From top 1938 design with single-engine Stearman, 1939, a fleet of Lockheed Electra was added and a contract for Douglas DC-3s was brought in. The "Great Lizard on Cloud" slogan, 1941, a DC-3, 1946, a DC-3. Last year when DC-7s were acquired and routes extended from Colorado to Tennessee, the "Great Lizard" slogan was dropped and the lizard plane added.

once an award of the route to Pan American exclusively. The Board denied applications by American Overseas, PCA, Swiss Shipping Co., American South African Line and U. S. Airways, though it found that all but the last were fit, willing and able to perform the service.

The opinion was signed by Vice Chairman Oswald Ryan and Members Harold Bessert and Beth Lee. Chairman Landa and Member Clarence Young did not participate.

Flying Shrimp Package

Non-refrigerated shipment of shrimp from the Gulf is underway. Shippers are guaranteed this month with the use of special heat-treated containers on which tests showed a rise of 7 degrees per hr. in a 70 degree outside temperature. The packages, lined with plastic mem-

brated by Goodyear Tire & Rubber Co., were despatched to shrimp shippers and processors at a Miami, Fla., meeting. Chicago & Southern Air Lines was selected to carry the first 2,000-lb load to Detroit, with predictions that daily shipments would be made to that city. Chicago and other points at markets expand.

CAB Acts to Solve No-show Problem

Approves ATA proposal that reservations be made on a line classed within one hour, other penalties considered.

CAB already has gone half way with the airlines on their no-show problem by approving Air Transport Association's proposed line reservations are not firm commitments and be subject to resale unless picked up and paid for within set time limits.

Traffic and Service Division of CAB recommended revision of the no-show rule, and the Board allowed line drops from August 14, which made August 15 the first day for legal publication of no-show Airlines' resale rules. The Board approved no-show as CAB does not suspect it.

Penalties Considered—Remaining portion of the proposed no-show penalty, as filed with the ATA for approval, is under consideration without hearings. United Air Lines asked for 100% deduction from refunds on reservations not cancelled at least 4 hrs. before scheduled departure time. AA offered 50% refund, but they ask only for cancellation before scheduled departure, except Colonial, which would be 100% effective rule made by UAL in Sept. 15, not retro Oct. 10.

For a while Braniff went along with UAL for 10% but later joined the others for 10%. CAB is working on a counter proposal that the lines agree on a uniform discount figure, let the system and its pattern be thrown into confusion. The figure could be anything, probably more than 10% and less than 25%. CAB wants a uniform refund penalty.

The stricter change of whatever percentage may be authorized would be applied on two ways: (1) an amount equal to the given percentage of the no-show fare covered by the passenger's ticket to the first point where a stopover of more than 6 hrs. is scheduled,



First Direct Link in contesting Pan American Airways to carry persons, property and mail over the two routes shown on the above map. CAB has created the first direct air link between South Africa and the U. S. PAA already flies the South American route indicated by the dotted line, and has been going as far as Leopoldville under temporary certification.

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NWA Mechanics Renew Strike Threat

Pending further negotiations with Northwest Airlines for settlement of the wage dispute which caused a 30-hour strike on July 3, the International Association of Machinists, bargaining agent for the airline's 946 maintenance mechanics, is planning to renew the strike threat, effective Sept. 7, date the Railway Labor Act's 30-day rule

will-off period expires following release of an emergency fact-finding board's report to President Truman.

The union announced at the time of the emergency board's appointment that the agreement to return to work was only temporary.

While the board granted night shift differentials of 4 and 6 cents an hour, it denied the union's demand for 33 less back benefits, 150-cent hourly wage increases and other benefits. The union has rejected the board's findings (which estimated IAMA strike airline while the company was bargaining in good faith) and is hopeful of negotiating a better settlement on the basis of offers made by the airline before the strike.

American Airlines Reports Net Loss of \$121,748 for '46

American Airlines has reported a net loss of \$121,748 for the first half of 1946. Despite a profit of \$331,336 for May and June. Loss for the first four months of the year was \$442,508.

The profit and loss statement did not include an estimated \$97,836 net cost from delays in selecting personnel from military contract to commercial operations and retaining personnel returning from military service, which was charged to

Army service, which was charged to American's reserve for transport to peacetime operations.

Passenger and freight revenues both showed increases over the first half of 1946, when the company showed a net profit of \$1,346,193. That operating expenses were higher, due to training expense on new type equipment, adoption of the 46-hr week and general wage increases, and delays in delivery of four-engine planes.

The line operates 46 four-engine planes and 25 DC-4's. On 15 target date for operation of its full fleet of 46 DC-4's.

PCA-NEA Merger Clear a New Hurdle

CAB consumer says deal would not cover revenues or properties other airlines, lower seed pay offs.

The proposed merger of Northeast Airlines and PCA has successfully cleared another hurdle with a finding by a CAB examiner that the deal would not create a monopoly, jeopardize another carrier or involve an excessive payment for NEA's assets and certificates.

In recommending that the Board approve the absorption, Commissioner E. T. Newman said the transaction was consistent with the public interest and offered prospects of real pay increases and lower fares. Black Exchange, 2-3—The financial terms of the merger—exchange of stock on the basis of two NEA shares for one PCA share—were not adjusted by the examiner, who pointed out that the rate approved the market value of the two carriers' securities and was not far out of line in relative book value.

The examiner contended that there has been very little interchange of passengers between PCA and Northeast in the past but said that establishment of new one-carrier service between cities on the two systems might result in an appreciable flow of new traffic. He declared that the two airlines companies each other to a considerable degree, asserting that as an extension northward from New York, NEA's system physically fits into PCA's system.

NEA Unprofitable — Newman noted that while NEA has been showing the second highest net pay rate of any carrier in the country during recent years it has not been able to show a profit. He said that because Northeast is appar-



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Interchangeable red fluorescent letters on a stainless steel screen mark on that shown above are being used by United Air Lines to direct travelers to the proper plane at main airport terminals.

only facing an immediate threat of greatly diminished competition from larger carriers on the Boston-New York segment it was doubtful that this bid would prove the solution to Northeast Airlines economic problems.

Airlines opposing the merger are American, Colonial, Eastern, National, TWA and United.

Air France Policy

Air France has announced it will put no Lockheed Constellation into trans-Atlantic service until the plane has been fully tested with all changes and improvements recommended by CAB. The line has 19 Constellations on order and received delivery on one before they were grounded recently, but has not used it in passenger service. Douglas DC-4's are being used on its North Atlantic operation.

Fire Study

In line with recommendations by the new Airline Operations Conference, Air Transport Association is studying the best way to increase the efficiency and functioning of airport fire and crash prevention units at airports and by the scheduled airlines. Whether ATA will have a specialist in such matters or work through a special committee has not been decided.

International Postal Meet To Consider Lower Rates

The theme on the agenda of the International Postal Congress when it convenes in Paris early next year will be reductions in international air mail postage rates, establishment of an international air parcel post system and more efficient international handling of mail at foreign points, according to Postmaster General Robert E. Hennegan.

Returning recently from a round-the-world tour with Second Assistant Postmaster General Noel Williams, Hennegan said heads of foreign postal administrations unanimously favored lower rates. He added that U. S. postal experts are now abroad working with European postal administrations in studying proposals for submission to the 1947 International Postal Congress.

Air Advisers

Alvin P. Adams and Associates, aviation consultants, Los Angeles, are serving as management advisers to Express Air-Americas, S. A. Cuba airline flying between Miami and Havana.

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FEEDER LOOKS AHEAD

First airline executive to enter the new 20-passenger Boeing 417 feederliner, Bert Zimmerman, president of Empire Air Lines, says a \$462,508 contract at Boeing's Seattle plant for three of the long-wing, four-engine planes. Looking on is Willard A. Beall, Boeing vice-president in charge of engineering and sales. Zimmerman plans to put the 417s in service next year on Empire's recently certificated feeder routes in Washington, Oregon, and Idaho. Empire now operates Boeing 247-D's.

32—TRANSPORT

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